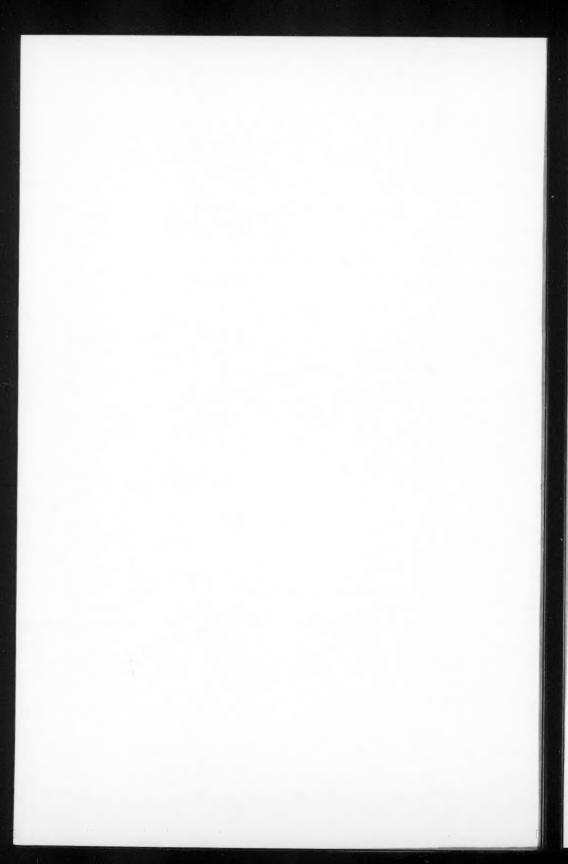
THE ANNALS of PROBABILITY

An Official Journal of the Institute of Mathematical Statistics

Articles appearing in *The Annals of Probability* (volumes 1-17) are indexed in the *Cumulative Index* to *IMS Scientific Journals*, available from the Institute of Mathematical Statistics.

VOLUME 23



CONTENTS OF VOLUME 23

Articles

ADLER, ROBERT J. AND SAMORODNITSKY, GENNADY. Super fractional Brownian motion, fractional super Brownian motion	
and related self-similar (super) processes	743-766
Markov field property of stochastic differential equations ALEXANDER, KENNETH S. Percolation and minimal spanning	1262-1288
forests in infinite graphs	87-104
walk	1061-1101
ARRATIA, RICHARD, STARK, DUDLEY AND TAVARÉ, SIMON. Total variation asymptotics for Poisson process approximations of	
logarithmic combinatorial assemblies	1347-1388
classes of exceptional times of linear Brownian motion BALDI, PAOLO. Exact asymptotics for the probability of exit from	1605-1626
a domain and applications to simulation	1644-1670
mation and support theorem in Hölder norm for parabolic stochastic partial differential equations	178-222
Bass, Richard F. and Khoshnevisan, Davar. Laws of the iterated logarithm for local times of the empirical process	388-399
BELL, DENIS R. AND MOHAMMED, SALAH-ELDIN A. Smooth densities for degenerate stochastic delay equations with heredi-	300 333
tary drift	1875-1894
Benjamini, Itai and Kesten, Harry. Percolation of arbitrary words in $\{0,1\}^{\mathbb{N}}$	1024-1060
BENJAMINI, ITAI, PEMANTLE, ROBIN AND PERES, YUVAL. Martin capacity for Markov chains	1332-1346
BHATT, ABHAY G., KALLIANPUR, G. AND KARANDIKAR, RAJEEVA L. Uniqueness and robustness of solution of measure-valued	
equations of nonlinear filtering	1895-1938
Yozo. Laplace approximations for large deviations of non-reversible Markov processes. The nondegenerate case	236-267
BURDZY, KRZYSZTOF AND SAN MARTÍN, JAIME. Iterated law of iterated logarithm.	1627-1643
BURDZY, KRZYSZTOF AND TOBY, ELLEN. A Skorohod-type lemma	586-604
and a decomposition of reflected Brownian motion CAIROLI, R. AND DALANG, ROBERT C. Optimal switching between	
two random walks	1982-2013
nondegenerate diffusion process	1557-1604
Asymptotic laws for one-dimensional diffusions conditioned to nonabsorption	1300-1314

iv INDEX

CUZICK, JACK, GINÉ, EVARIST AND ZINN, JOEL. Laws of large numbers for quadratic forms, maxima of products and trun-	
cated sums of i.i.d. random variables	292-333
DALANG, ROBERT C. AND CAIROLI, R. Optimal switching between	1000 0010
two random walks	1982-2013
DARLING, R. W. R. Constructing gamma-martingales with pre-	1004 1061
scribed limit, using backwards SDE	1234-1261
sum convergence for weakly dependent random variables	
with infinite variance	879-917
DAWSON, D., LI, Y. AND MUELLER, C. The support of measure-	013 311
valued branching processes in a random environment	1692-1718
DAWSON, DONALD A., FLEISCHMANN, KLAUS, LI, YI AND MUELLER,	1002 1110
CARL. Singularity of super-Brownian local time at a point	
catalyst	37-55
DEHEUVELS, PAUL AND MASON, DAVID M. On the fractal nature	
of empirical increments	355-387
DE LA PEÑA, VICTOR H. AND MONTGOMERY-SMITH, S. J. Decou-	
pling inequalities for the tail probabilities of multivariate	
U-statistics	806-816
DEUSCHEL, JEAN-DOMINIQUE, YAMURA, YOZO AND BOLTHAUSEN,	
ERWIN. Laplace approximations for large deviations of non-	
reversible Markov processes. The nondegenerate case	236-267
DEUSCHEL, JEAN-DOMINIQUE AND ZEITOUNI, OFER. Limiting	050 070
curves for i.i.d. records	852-878
some measure-valued jump processes	1414-1438
Down, D., Meyn, S. P. and Tweedie, R. L. Exponential and	1414 1400
uniform ergodicity of Markov processes	1671-1691
DURRETT, RICK AND SCHINAZI, RINALDO. Intermediate phase for	1011 1001
the contact process on a tree	668-673
EINMAHL, UWE. On the cluster set problem for the generalized	
law of the iterated logarithm in Euclidean space	817-851
EVANS, STEVEN N. AND PERKINS, EDWIN A. Explicit stochastic	
integral representations for historical functionals	1772-1815
FERRANTE, MARCO, NUALART, DAVID AND ALABERT, AURELI.	
Markov field property of stochastic differential equations	1262-1288
FERRARI, P. A., KESTEN, H., MARTINEZ, S. AND PICCO, P. Exis-	
tence of quasi-stationary distributions. A renewal dynamical	F01 F01
approach	501-521
DONALD A. Singularity of super-Brownian local time at a	
point catalyst	37-55
GINÉ, EVARIST, ZINN, JOEL AND CUZICK, JACK. Laws of large	01 00
numbers for quadratic forms, maxima of products and trun-	
cated sums of i.i.d. random variables	292-333

Griffin, Philip S. and McConnell, Terry R. L^p -boundedness of the overshoot in multidimensional renewal theory	2022-2056
HÄGGSTRÖM, OLLE AND MEESTER, RONALD. Asymptotic shapes	
for stationary first passage percolation	1511-1522
HAHN, MARJORIE G. AND KLASS, MICHAEL J. Uniform local prob-	
ability approximations: improvements on Berry-Esseen	446-463
HAMMACK, WILLIAM. Sharp inequalities for the distribution of a	
stochastic integral in which the integrator is a bounded submartingale	223-235
HOUDRÉ, CHRISTIAN. On the almost sure convergence of series	220-200
of stationary and related nonstationary variables	1204-1218
HOUDRÉ, CHRISTIAN. Reconstruction of band limited processes	1201 1210
from irregular samples	674-696
HOUDRÉ, CHRISTIAN AND PÉREZ-ABREU, VÍCTOR. Covariance	
identities and inequalities for functionals on Wiener and	
Poisson spaces	400 - 419
HSING, TAILEN. A note on the asymptotic independence of the	
sum and maximum of strongly mixing stationary random	
variables	938-947
HSING, TAILEN AND DAVIS, RICHARD A. Point process and partial	
sum convergence for weakly dependent random variables	879-917
with infinite variance	819-911
some measure-valued jump processes	1414-1438
KALLIANPUR, G., KARANDIKAR, RAJEEVA L. AND BHATT, ABHAY G.	1414 1400
Uniqueness and robustness of solution of measure-valued	
equations of nonlinear filtering	1895-1938
KALPAZIDOU, S. On the rotational dimension of stochastic	
matrices	966-975
Karandikar, Rajeeva L., Bhatt, Abhay G. and Kallianpur, G.	
Uniqueness and robustness of solution of measure-valued	
equations of nonlinear filtering	1895–1938
KENDALL, WILFRED S. The radial part of a Γ-martingale and a	479-500
non-implosion theorem	479-500
plosions and explosions in Markov jump processes	268-272
KESTEN, HARRY AND BENJAMINI, ITAI. Percolation of arbitrary	200 212
words in $\{0, 1\}^{\mathbb{N}}$	1024-1060
KESTEN, H., MARTINEZ, S., PICCO, P. AND FERRARI, P. A. Exis-	
tence of quasi-stationary distributions. A renewal dynamical	
approach	501-521
KHOSHNEVISAN, DAVAR. On the distribution of bubbles of the	
Brownian sheet	786-805
KHOSHNEVISAN, DAVAR AND BASS, RICHARD F. Laws of the iter-	000 000
ated logarithm for local times of the empirical process	388-399

vi INDEX

KLASS, MICHAEL J. AND HAHN, MARJORIE G. Uniform local prob-	
ability approximations: improvements on Berry-Esseen	446-463
KLEBANER, F. C. AND KERSTING, G. Sharp conditions for nonex-	
plosions and explosions in Markov jump processes	268 - 272
LAWLER, GREGORY F. Subdiffusive fluctuations for internal dif-	
fusion limited aggregation	71-86
LEDRAPPIER, FRANÇOIS. Central limit theorem in negative	
curvature	1219-1233
LEE, TZONG-YOW. Large deviations for independent random	404# 4004
walks on the line	1315-1331
LEE, TZONG-YOW AND REMILLARD, BRUNO. Large deviations for	1755 1771
the three-dimensional super-Brownian motion LEFÈVRE, CLAUDE AND UTEV, SERGEY. Poisson approximation	1755-1771
for the final state of a generalized epidemic process	1139-1162
LE GALL, JEAN-FRANÇOIS AND ASPANDIIAROV, SANJAR. Some new	1105 1102
classes of exceptional times of linear Brownian motion	1605-1626
LE GALL, JEAN-FRANÇOIS AND PERKINS, EDWIN A. The Hausdorff	1000 1020
measure of the support of two-dimensional super-Brownian	
motion	1719-1747
LEURIDAN, CHRISTOPHE. Contrôle de la norme H^p d'une martin-	
gale par des maximums de temps locaux	1289-1299
LI, Y., MUELLER, CARL AND DAWSON, D. The support of mea-	
sure-valued branching processes in a random environment .	1692-1718
LI, YI, MUELLER, C., DAWSON, DONALD A. AND FLEISCHMANN,	
KLAUS. Singularity of super-Brownian local time at a point	05 55
catalyst	37-55
LIAO, M. AND ZHENG, W. A. Radial part of Brownian motion on a Riemannian manifold.	173-177
LIGGETT, THOMAS M. Improved upper bounds for the contact	113-111
process critical value	697-723
LIMING, Wu. Moderate deviations of dependent random vari-	001 120
ables related to CLT	420-445
LIU, XIJIAN. Symmetric two-particle exclusion-eating processes.	1439-1455
LLOYD, PETER AND SUDBURY, AIDAN. Quantum operators in clas-	
sical probability theory: II. The concept of duality in inter-	
acting particle systems	1816-1830
Lu, Shenglin. Hydrodynamic scaling limits with deterministic	
initial configurations	1831 - 1852
Lyons, Russell, Pemantle, Robin and Peres, Yuval. Concep-	
tual proofs of $L \log L$ criteria for mean behavior of branch-	1105 1100
ing processes	1125-1138
Asymptotic laws for one-dimensional diffusions conditioned	
to nonabsorption	1300-1314
Martinez, S., Picco, P., Ferrari, P. A. and Kesten, H. Exis-	1000 1014
tence of quasi-stationary distributions. A renewal dynamical	
approach	501-521

Marcon Darre Marcon Description Darre On the Carlot	
Mason, David M. and Deheuvels, Paul. On the fractal nature of empirical increments	355-387
of the overshoot in multidimensional renewal theory MEESTER, RONALD AND HÄGGSTRÖM, OLLE. Asymptotic shapes	2022-2056
for stationary first passage percolation	1511-1522
uniform ergodicity of Markov processes	1671-1691
MILLET, ANNIE, SANZ-SOLÉ, MARTA AND BALLY, VLAD. Approximation and support theorem in Hölder norm for parabolic stochastic partial differential equations	178-222
ties for degenerate stochastic delay equations with hereditary drift	1875-1894
Monat, Pascale and Stricker, Christophe. Föllmer-Schweizer decomposition and mean-variance hedging for general	1010 1001
claims	605-628
pling inequalities for the tail probabilities of multivariate <i>U</i> -statistics	806-816
MUELLER, C., DAWSON, D. AND LI, Y. The support of measure-	1692-1718
valued branching processes in a random environment Mueller, Carl, Dawson, Donald A., Fleischmann, Klaus and	1092-1718
LI, YI. Singularity of super-Brownian local time at a point catalyst	37-55
NUALART, DAVID, ALABERT, AURELI AND FERRANTE, MARCO. Markov field property of stochastic differential equations	1262-1288
OVERBECK, LUDGER, RÖCKNER, MICHAEL AND SCHMULAND, BYRON. An analytic approach to Fleming-Viot processes with inter-	
active selection	1-36
random environment on trees	105-140
the same mean have the same polar sets PEMANTLE, ROBIN, PERES, YUVAL AND BENJAMINI, ITAI. Martin	1102-1124
capacity for Markov chains	1332-1346
tual proofs of $L \log L$ criteria for mean behavior of branch-	1105 1100
ing processes. Peres, Yuval, Benjamini, Itai and Pemantle, Robin. Martin	1125-1138
capacity for Markov chains	1332-1346
tual proofs of $L \log L$ criteria for mean behavior of branching processes	1125-1138
PERES, YUVAL AND PEMANTLE, ROBIN. Critical random walk in random environment on trees	105-140

viii INDEX

PERES, YUVAL AND PEMANTLE, ROBIN. Galton-Watson trees with the same mean have the same polar sets	1102-1124
PÉREZ-ABREU, VÍCTOR AND HOUDRÉ, CHRISTIAN. Covariance	1102 1124
identities and inequalities for functionals on Wiener and Poisson spaces	400-419
PERKINS, EDWIN A. AND EVANS, STEVEN N. Explicit stochastic	100 110
integral representations for historical functionals PERKINS, EDWIN A. AND LE GALL, JEAN-FRANÇOIS. The Haus-	1772-1815
dorff measure of the support of two-dimensional super- Brownian motion	1719-1747
PESZAT, SZYMON AND ZABCZYK, JERZY. Strong Feller property	1113 1141
and irreducibility for diffusions on Hilbert spaces	157-172
PICCO, P., FERRARI, P. A., KESTEN, H. AND MARTINEZ, S. Exis-	
tence of quasi-stationary distributions. A renewal dynamical approach.	501-521
PINSKY, Ross G. On the large time growth rate of the support	001 021
of supercritical super-Brownian motion	1748-1754
PIZA, MARCELO S. T. AND NEWMAN, CHARLES M. Divergence of	
shape fluctuations in two dimensions	977-1005
ing limit for a nongradient system	724-742
REINERT, GESINE. A weak law of large numbers for empirical	
measures via Stein's method	334-354
REMILLARD, BRUNO AND LEE, TZONG-YOW. Large deviations for	10FF 1001
the three-dimensional super-Brownian motion RIO, EMMANUEL. A maximal inequality and dependent	1755-1771
Marcinkiewicz-Zygmund strong laws	918-937
RIO, EMMANUEL. The functional law of the iterated logarithm	
for stationary strongly mixing sequences	1188-1203
RÖCKNER, MICHAEL, SCHMULAND, BYRON AND OVERBECK, LUDGER. An analytic approach to Fleming-Viot processes with inter-	
active selection	1-36
ROSIŃSKI, JAN. Remarks on strong exponential integrability of	
vector-valued random series and triangular arrays	464-473
ROSINSKI, JAN. On the structure of stationary stable processes.	1163-1187
SAMORODNITSKY, GENNADY AND ADLER, ROBERT J. Super frac- tional Brownian motion, fractional super Brownian motion	
and related self-similar (super) processes	743-766
SAN MARTÍN, JAIME AND BURDZY, KRZYSZTOF. Iterated law of	
iterated logarithm.	1627-1643
SAN MARTÍN, JAIME, COLLET, PIERRE AND MARTÍNEZ, SERVET. Asymptotic laws for one-dimensional diffusions conditioned	
to nonabsorption	1300-1314
SANZ-SOLÉ, MARTA, BALLY, VLAD AND MILLET, ANNIE. Approxi-	
mation and support theorem in Hölder norm for parabolic	480 000
stochastic partial differential equations	178 - 222

ix

SCHINAZI, RINALDO AND DURRETT, RICK. Intermediate phase for	
the contact process on a tree	668-673
An analytic approach to Fleming-Viot processes with inter-	
active selection	1-36
Shao, Qi-Man. Maximal inequalities for partial sums of ρ -mix-	
ing sequences	948-965
SIMONELLI, ITALO. A limit theorem for a class of interacting	
particle systems	141-156
SOWERS, RICHARD B. Intermittency-type estimates for some	1050 1051
nondegenerate SPDE's	1853-1874
variation asymptotics for Poisson process approximations of	
logarithmic combinatorial assemblies	1347-1388
STONG, RICHARD. Eigenvalues of random walks on groups	1961-1981
STONG, RICHARD. Eigenvalues of the natural random walk on	
the Burnside group $B(3, n)$	1950-1960
STONG, RICHARD. Random walks on the groups of upper trian-	
gular matrices	1939-1949
STRICKER, CHRISTOPHE AND MONAT, PASCALE. Föllmer-Schweizer	
decomposition and mean-variance hedging for general	COT COO
claims	605-628
sical probability theory: II. The concept of duality in inter-	
acting particle systems	1816-1830
SZNITMAN, ALAIN-SOL. Crossing velocities and random lattice	1010 1000
animals	1006-1023
TALAGRAND, MICHEL. A borderline random Fourier series	776-785
TALAGRAND, MICHEL. Hausdorff measure of trajectories of mul-	
tiparameter fractional Brownian motion	767-775
TAMURA, YOZO, BOLTHAUSEN, ERWIN AND DEUSCHEL, JEAN-	
DOMINIQUE. Laplace approximations for large deviations of	236-267
nonreversible Markov processes. The nondegenerate case TAVARÉ, SIMON, ARRATIA, RICHARD AND STARK, DUDLEY. Total	230-207
variation asymptotics for Poisson process approximations of	
logarithmic combinatorial assemblies	1347-1388
TOBY, ELLEN AND BURDZY, KRZYSZTOF. A Skorohod-type lemma	
and a decomposition of reflected Brownian motion	586-604
То́тн, Bálint. The "true" self-avoiding walk with bond repul-	
sion on \mathbb{Z} : limit theorems	1523-1556
TOWGHI, NASSER. Stochastic integration of processes with finite	200 225
generalized variations. I	629-667
TWEEDIE, R. L., DOWN, D. AND MEYN, S. P. Exponential and uniform ergodicity of Markov processes	1671-1691
UTEV, SERGEY AND LEFÈVRE, CLAUDE. Poisson approximation	1011-1031
for the final state of a generalized epidemic process	1139-1162

x INDEX

VANDERBEI, ROBERT J. A probabilistic formula for the concave		
hull of a function	2014-2021	
ian motion	56-70	
subordination for continuous-time Martingales and related		
sharp inequalities	522-551	
integrable martingales	552-585	
XIAO, YIMIN. Dimension results for Gaussian vector fields and index- α stable fields	273-291	
ZABCZYK, JERZY AND PESZAT, SZYMON. Strong Feller property and irreducibility for diffusions on Hilbert spaces	157-172	
ZEITOUNI, OFER AND DEUSCHEL, JEAN-DOMINIQUE. Limiting		
curves for i.i.d. records	852-878	
a Riemannian manifold	173-177	
quasilinear PDE's	1389-1413	
ZINN, JOEL, CUZICK, JACK AND GINÉ, EVARIST. Laws of large numbers for quadratic forms, maxima of products and trun- cated sums of i.i.d. random variables	292-333	
Book Review		
O'CONNELL, NEIL. Review of Lectures on the Coupling Method by Torgny Lindvall	1456-1460	
Corrections		
ALGOET, PAUL H. Universal prediction schemes	474-478	
NEWMAN, CHARLES M. AND PIZA, MARCELO S. T. Divergence of shape fluctuations in two dimensions	2057	
Piza, Marcelo S. T. and Newman, Charles M. Divergence of shape fluctuations in two dimensions	2057	
Special Invited Papers		
GRIMMETT, GEOFFREY. The stochastic random-cluster process,	1401 1810	
and the uniqueness of random-cluster measures NEWMAN, CHARLES M. AND PIZA, MARCELO S. T. Divergence of	1461-1510	
shape fluctuations in two dimensions	977-1005	

